

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	09931469
Filing Date	2001-08-16
First Named Inventor	Rajiv Laroia
Art Unit	2616
Examiner Name	Nittaya Juntima
Attorney Docket Number	060542

U.S. PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code†	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	5268694		1993-12-07	JAN et al.	
	2	5867478		1999-02-02	Baum, et al.	
	3	5887023		1999-03-23	Mabuchi	
	4	5933421		1999-08-03	Alamouti, et al.	
	5	5956642		1999-09-21	Larsson, et al.	
	6	6038263		2000-03-14	Kotzin, et al.	
	7	6038450		2000-03-14	Brink, et al.	
	8	6061337		2000-05-09	Light, et al.	

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	09931469
Filing Date	2001-08-16
First Named Inventor	Rajiv Laroia
Art Unit	2616
Examiner Name	Nittaya Junlita
Attorney Docket Number	060542

9	6112094		2000-08-29	Dent	
10	6335922		2002-01-01	Tiedsmann, Jr., et al.	
11	6337983		2002-01-08	Bonta, et al.	
12	6377539		2002-04-23	Kang, et al.	
13	6388998		2002-05-14	Kasturia	
14	6466800		2002-10-15	Sydon, et al.	
15	6473467		2002-10-29	Wallace, et al.	
16	6519462		2003-02-11	Lu, et al.	
17	6584140		2003-06-24	Lee	
18	6597746		2003-07-22	Amrany, et al.	
19	6693952		2004-02-17	Chuah, et al.	

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	09931469
Filing Date	2001-08-16
First Named Inventor	Rajiv Laroia
Art Unit	2616
Examiner Name	Nittaya Juntima
Attorney Docket Number	060542

20	6751444		2004-06-15	Meiyappan	
21	6763009		2004-07-13	Bedekar, et al.	
22	6778513		2004-08-17	Kasapi, et al.	
23	6862271		2005-03-01	Medvedev, et al.	
24	6870826		2005-03-22	Ishizu	
25	6904550		2005-06-07	Sibecas, et al.	
26	6909797		2005-06-21	Rotstein, et al.	
27	7006557		2006-02-28	Subrahmanya, et al.	
28	7061898		2006-06-13	Hashem, et al.	
29	7069009		2006-06-27	Li, et al.	
30	7072315		2006-07-04	Liu, et al.	

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	09931469
Filing Date	2001-08-16
First Named Inventor	Rajiv Laroia
Art Unit	2616
Examiner Name	Nittaya Juntima
Attorney Docket Number	060542

31	7099299		2006-08-29	Liang, et al.	
32	7133460		2006-11-07	Bae, et al.	
33	7149238		2006-12-12	Agee, et al.	
34	7151936		2006-12-19	Wager, et al.	
35	7161971		2007-01-09	Tiedemann, Jr., et al.	
36	7200177		2007-04-03	Miyoshi	
37	7248559		2007-07-24	Ma, et al.	
38	7280467		2007-10-09	Smee, et al.	
39	7313086		2007-12-25	Aizawa	
40	7313126		2007-12-25	Yun, et al.	
41	7313174		2007-12-25	Alard, et al.	

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	09931469
Filing Date	2001-08-16
First Named Inventor	Rajiv Laroia
Art Unit	2816
Examiner Name	Nittaya Juntima
Attorney Docket Number	060542

42	7313407		2007-12-25	Shapira	
43	7327812		2008-02-05	Auer	
44	7366520		2008-04-29	Haustein, et al.	
45	7379489		2008-05-27	Zuniga, et al.	
46	7406336		2008-07-29	Astely, et al.	
47	7418043		2008-08-26	Shattil	

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	20030072255		2003-04-17	Ma, et al.	
	2	20040001429		2004-01-01	Ma, et al.	
	3	20040166887		2004-08-26	Laroia, et al.	

If you wish to add additional U.S. Published Application citation information please click the Add button.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number		09931469
Filing Date		2001-08-16
First Named Inventor	Rajiv Laroia	
Art Unit	2616	
Examiner Name	Nittaya Juntima	
Attorney Docket Number	060542	

FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1	1148673	EP		2001-10-24	Qualcomm, Inc.		<input type="checkbox"/>
	2	1187506	EP		2002-03-13	Lucent Technologies, Inc.		<input type="checkbox"/>
	3	1445873	EP		2004-08-11	NTT DOCOMO, Inc.		<input type="checkbox"/>
	4	1542488	EP		2005-06-15	Telefonaktiebolaget LM Ericsson		<input type="checkbox"/>
	5	1601149	EP		2005-11-30	NTT DoCoMo, Inc.		<input type="checkbox"/>
	6	1643669	EP		2006-04-05	Matsushita Electric Industrial Co., LTD.		<input type="checkbox"/>
	7	2000-332724	JP		2000-11-30	Mitsubishi Electric Corp.		<input type="checkbox"/>
	8	9800946	WO		1998-01-09	Univ Leland Stanford Junior		<input type="checkbox"/>
	9	99052250	WO		1999-10-14	Tellabs Operations Inc.		<input type="checkbox"/>

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number		09931469
Filing Date		2001-08-16
First Named Inventor	Rajiv Larola	
Art Unit	2616	
Examiner Name	Nittaya Juntima	
Attorney Docket Number	060542	

10	02031991	WO		2002-04-18	Broadstorm Telecommunications, Inc.	<input type="checkbox"/>
11	04008681	WO		2004-01-22	Koninklijke Philips Electronics N.V.	<input type="checkbox"/>
12	04030238	WO		2004-04-08	Koninklijke Philips Electronics N.V.	<input type="checkbox"/>
13	04038972	WO		2004-05-06	Electronics and Telecommunications Research Inst.	<input type="checkbox"/>
14	04051872	WO		2004-06-17	Interdigital Technology Corp.	<input type="checkbox"/>
15	05015797	WO		2005-02-17	Matsushita Electric Industrial Co., Ltd.	<input type="checkbox"/>
16	04073276	WO		2006-08-26	Docomo Communications Laboratories Europe GMBH	<input type="checkbox"/>
17	06099545	WO		2006-09-21	Qualcomm, Inc.	<input type="checkbox"/>
18	06099577	WO		2006-09-21	Qualcomm, Inc.	<input type="checkbox"/>
19	06127544	WO		2006-11-30	Qualcomm, Inc.	<input type="checkbox"/>
20	07024935	WO		2007-03-01	Qualcomm, Inc.	<input type="checkbox"/>

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	09931469
Filing Date	2001-08-16
First Named Inventor	Rajiv Laroia
Art Unit	2616
Examiner Name	Nittaya Juntima
Attorney Docket Number	060542

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	CHENNAKESHU, et al. "A COMPARISON OF DIVERSITY SCHEMES FOR A MIXED-MODE SLOW FREQUENCY-HOPPED CELLULAR SYSTEM," IEEE, 1993, pgs. 1749-1753.	<input type="checkbox"/>
	2	CHENNAKESHU, et al. "CAPACITY ANALYSIS OF A TDMA-BASED SLOW-FREQUENCY -HOPPED CELLULAR SYSTEM," IEEE TRANSACTION ON VEHICULAR TECHNOLOGY, VOL 45., NO. 3 AUGUST 1996, pgs. 531-542.	<input type="checkbox"/>
	3	CHIANI, et al. "OUTAGE EVALUATION FOR SLOW FREQUENCY-HOPPING MOBILE RADIO SYSTEMS" IEEE TRANSACTIONS ON COMMUNICATIONS, VOL. 47, NO. 12, pgs. 1865-1874, DECEMBER 1999.	<input type="checkbox"/>
	4	CHOI, ET AL., "Design of the Optimum Pilot Pattern for Channel Estimation in OFDM Systems," Global Telecommunications Conference, IEEE Communications Society, pgs. 3661-3665, Globecom, Dallas, Texas (2004)	<input type="checkbox"/>
	5	CZYLWIK, "Comparison Between Adaptive OFDM and Single Carrier Modulation with Frequency Domain Equalization," IEEE 47th Vehicular Technology Conference, Vol. 2, 4-7 May 1997, pp. 865-869.	<input type="checkbox"/>
	6	DAS, et al. "ON THE REVERSE LINK INTERFERENCE STRUCTURE FOR NEXT GENERATION CELLULAR SYSTEMS," EUROPEAN MICROWAVE CONFERENCE, 11 OCTOBER 2004 (2004-10-11), pgs. 3068-3072.	<input type="checkbox"/>
	7	DINIS, et al., "A Multiple Access Scheme for the Uplink of Broadband Wireless Systems," IEEE Global Telecommunications Conference, 2004, GLOBECOM '04, vol. 6, 29 Nov. 3 Dec. 2004, pp. 3808-3812.	<input type="checkbox"/>
	8	HILL, et al., "Cyclic Shifting and Time Inversion of Partial Transmit Sequences to Reduce the Peak-to-Average Power Ratio in OFDM," IEEE International Symposium on Personal, Indoor and Mobile Radio Communications, vol. 2, Sept. 18, 2000, Piscataway, NJ, p	<input type="checkbox"/>
	9	JE, et al. "A NOVEL MULTIPLE ACCESS SCHEME FOR UPLINK CELLULAR SYSTEMS," IEEE VEHICULAR TECHNOLOGY CONFERENCE, 26 SEPTEMBER 2004 (2004-09-26) pgs. 984-988.	<input type="checkbox"/>

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	09931469
Filing Date	2001-08-16
First Named Inventor	Rajiv Laroia
Art Unit	2616
Examiner Name	Nittaya Juntima
Attorney Docket Number	060542

10	KALEH, "Channel Equalization for Block Transmission Systems," IEEE Journal on Selected Areas in Communications, Vol. 13, No. 1, January 1995, pp. 110-121	<input type="checkbox"/>
11	KELLER, et al., "Adaptive Multicarrier Modulation: A Convenient Framework for Time-Frequency Processing in Wireless Communications," Proceedings of the IEEE, Vol. 88, No. 5, May 2000, pp. 611-640.	<input type="checkbox"/>
12	KIM, et al. "PERFORMANCE OF TDMA SYSTEM WITH SFH AND 2-BIT DIFFERENTIALLY DETECTED GMSK OVER RAYLEIGH FADING CHANNEL," IEEE VEHICULAR TECHNOLOGY CONFERENCE, 28 APRIL 1996 (1996-04-28), pgs. 789-793.	<input type="checkbox"/>
13	KISHIYAMA Y ET AL: "Investigation of Optimum Pilot Channel Structure for VSF-OFCDM Broadband Wireless Access in Forward Link", IEEE VEHICULAR TECHNOLOGY CONFERENCE, New York, NY, US, Vol. 4, pgs. 139-144, 22 April 2003.	<input type="checkbox"/>
14	KOSTIC, et al. "FUNDAMENTALS OF DYNAMIC FREQUENCY HOPPING IN CELLULAR SYSTEMS," IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS, VOL. 19, NO. 11, NOVEMBER 2001 pgs. 2254-2266.	<input type="checkbox"/>
15	KOSTIC, et al. "DYNAMIC FREQUENCY HOPPING IN WIRELESS CELLULAR SYSTEMS-SIMULATIONS OF FULL-REPLACEMENT AND REDUCED-OVERHEAD METHODS," IEEE VEHICULAR TECHNOLOGY CONFERENCE, 16 MAY 1999 (1999-05-16), PGS. 914-918.	<input type="checkbox"/>
16	LACROIX, et al., "A Study of OFDM Parameters for High Data Rate Radio LAN's," 2000 IEEE 51st Vehicular Technology Conference Proceedings, Vol. 2, 15-18 May 2000, pp. 1075-1079.	<input type="checkbox"/>
17	LEON, et al., "Cyclic Delay Diversity for Single Carrier-Cyclic Prefix Systems," Conference Record of the Thirty-Ninth Asilomar Conference on Signals, Systems and Computers, Oct. 28, 2005, Piscataway, NJ, pp. 519-523.	<input type="checkbox"/>
18	LOTT, "Comparison of Frequency and Time Domain Differential Modulation in an OFDM System for Wireless ATM," 1999 IEEE 49th Vehicular Technology Conference, vol. 2, July 1999, pp. 877-883.	<input type="checkbox"/>
19	MIGNONE, et al., "CD3-OFDM: A New Channel Estimation Method to Improve the Spectrum Efficiency in Digital Terrestrial Television Systems," International Broadcasting Convention, 14-18 September 1995 Conference Publication No. 413, IEE 1995, pp. 122-128	<input type="checkbox"/>
20	NAOFAL AL-DHAHIR: "A Bandwidth-Optimized Reduced-Complexity Equalized Multicarrier Transceiver", IEEE Transactions on Communications, Vol. 45, No. 8, August 1997.	<input type="checkbox"/>

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	09931469
Filing Date	2001-08-16
First Named Inventor	Rajiv Laroia
Art Unit	2616
Examiner Name	Nittaya Juntima
Attorney Docket Number	060542

21	NASSAR, CARL R., et al., "High-Performance MC-CDMA via Carrier Interferometry Codes", IEEE Transactions on Vehicular Technology, Vol. 50, No. 6, November 2001.	<input type="checkbox"/>
22	SARI, et al., "Transmission Techniques for Digital Terrestrial TV Broadcasting," IEEE Communications Magazine, February 1995, pp. 100-109.	<input type="checkbox"/>
23	SCHNELL, et al., "A Promising New Wideband Multiple-Access Scheme for Future Mobile Communications Systems," European Transactions on Telecommunications, Wiley & Sons, Chichester, GB, vol. 10, no. 4, July 1999, pp. 417-427.	<input type="checkbox"/>
24	SCHNELL, et al, "Application of IFDMA to Mobile Radio Transmission," IEEE 1998 International Conference on Universal Personal Communications, Vol. 2, 5-9 Oct. 1998, pp. 1267-1272.	<input type="checkbox"/>
25	SKLAR: "Formatting and Baseband Transmission", Chapter 2, pgs. 54, 104-106.	<input type="checkbox"/>
26	TELLAMBURA, "Use of m-sequences for OFDM Peak-to-Average Power Ratio Reduction," Electronics Letters, Vol. 33, No. 15, 17 July 1997, pp. 1300-1301.	<input type="checkbox"/>
27	TORRIERI, "CELLULAR FREQUENCY-HOPPING CDMA SYSTEMS," IEEE VEHICULAR TECHNOLOGY CONFERENCE, 16 MAY 1999 (1999-05-16), pgs. 919-925.	<input type="checkbox"/>
28	XIAODONG, et al., "M-Sequences for OFDM Peak-to-Average Power Ratio Reduction and Error Correction," Electronics Letters, Volume 33, Issue 7, 27 March 1997, pp. 554-555.	<input type="checkbox"/>
29	ZEKRI, et al., "DMT Signals with Low Peak-to-Average Power Ratio," Proceedings, IEEE International Symposium on Computers and Communications, 1999, 6-8 July 1999, pp. 362-368.	<input type="checkbox"/>
30	3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Physical Layer Aspects for Evolved UTRA (Release 7), 3GPP TR 25.814 v0.3.1 (2005-11)	<input type="checkbox"/>
31	International Search Report - PCT/US01/028315, International Search Authority - European Patent Office - 06-21-2002	<input type="checkbox"/>

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	09931469
Filing Date	2001-08-16
First Named Inventor	Rajiv Laroia
Art Unit	2616
Examiner Name	Nittaya Juntima
Attorney Docket Number	060542

32

International Preliminary Exam Report - PCT/US01/028315, International Preliminary Examining Authority - US, 04-11-03



If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.